

A CONSTANT IMPEDANCE FILTER

ABSTRACT OF THE DISCLOSURE

A constant impedance filter maintains a constant input impedance for frequencies that are both inside the filter passband and outside the filter passband. The constant input impedance appears as a pure resistance. The constant impedance filter includes a plurality of filter poles that are connected in series. Each of the filter poles include an inductor, a capacitor, and a resistor. The value of the inductor, the capacitor, and the resistor are selected to provide a constant input impedance over frequency for each pole of the filter, which produces a constant input impedance for the entire filter over frequency. The constant impedance filter can be implemented as a low pass filter, a high pass filter, or a bandpass filter. Furthermore, the constant impedance filter can be implemented in a single-ended configuration or a differential configuration.

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